
Fundamentals of Process Management

Best Practices in Optimizing Cross-Functional Business Processes

By Robert M. Curtice
Vice President, Performance Improvement Associates, LLC

Excellence in process management enables a company to successfully align business practices with strategic objectives across the entire organization. As a result, functional silos or roadblocks disappear and the company is better positioned to satisfy all stakeholders—customers, owners, and employees.

Process management is a set of reengineering techniques, coupled with an organizational mechanism, that enables a company to both:

- Achieve cross-organization efficiencies, gained through a common set of business processes and supporting information systems, and
- Satisfy the unique needs of different market segments and business units

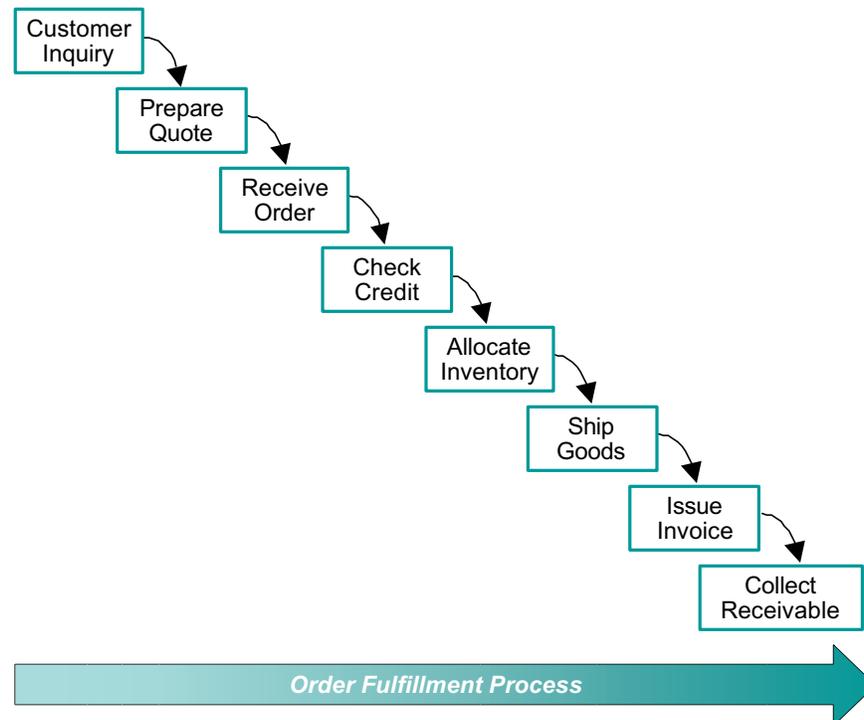
The ability to rationalize and streamline business processes—especially those concerned with customer service, product management, order processing, and supply chain management—creates opportunities to improve customer service and reduce costs. This is particularly important, for example, subsequent to a merger in which conflicting policies and procedures must be homogenized to capture the value inherent in the deal. Additionally, process improvement and rationalization is necessary prior to implementation of e-business solutions for sales and service, participation in marketplace exchanges, or supply chain integration with trading partners.

Process management creates opportunities to improve customer service and reduce costs.

The Need for Process Management

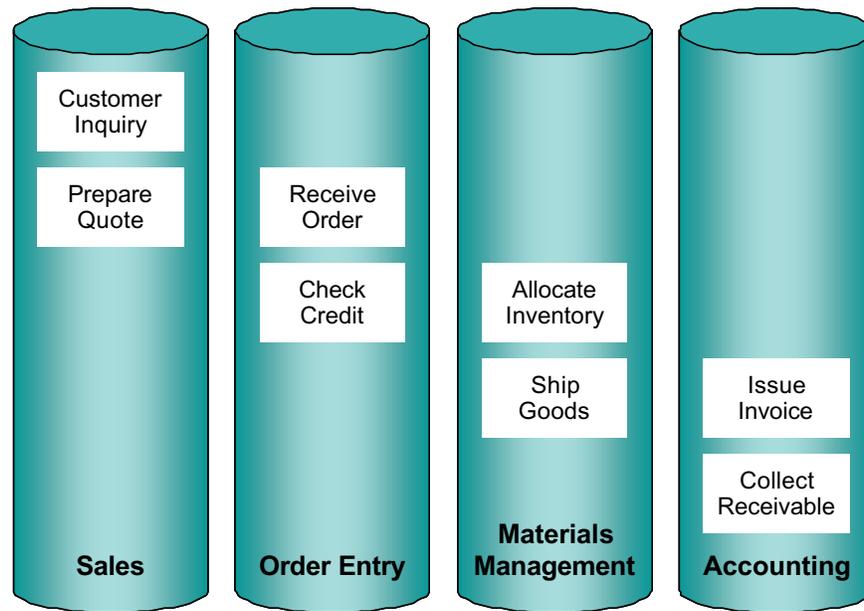
A process is the set of all cross-functional work activities that produce results meaningful to an internal or external customer. The order-fulfillment process may, for instance, consist of many activities, as depicted in Figure 1.

Figure 1: Activities Within the Order-Fulfillment Process



Within a process, however, different activities may be carried out by personnel in separate organizational functions. Typically, each organizational function has its own set of objectives and performance measures that tend to hinder overall process optimization. In essence, no one in the organization has the purview for the entire process, end-to-end, to ensure it is optimal companywide. Instead, the focus is on individual functions—providing a “silo” perspective, as shown in Figure 2.

Figure 2: Functional Silos



An organization typically has 6 to 12 top-level business processes, such as:

- *Create Products*
- *Manage Supply Chain*
- *Produce Product*
- *Create Demand*
- *Service Customer*
- *Develop Business Strategy*
- *Manage Financial Resources*
- *Manage Human Resources*

Almost everything a company does to conduct its business is covered within these processes, which are neither functions (e.g., engineering, marketing) nor organizational constructs. Processes define what work gets done, not who does it. Thus, every manager performs activities within *Manage Human Resources*, and individuals frequently carry out activities in more than one process. These top-level processes can be further divided into sub-processes and activities for analysis and improvement.

Processes define what gets done, not who does it.

Process improvement (also called “business process redesign” or “reengineering”) is directed at streamlining a business process for greater efficiency and effectiveness. This is frequently accomplished by taking a broad, fresh look to:

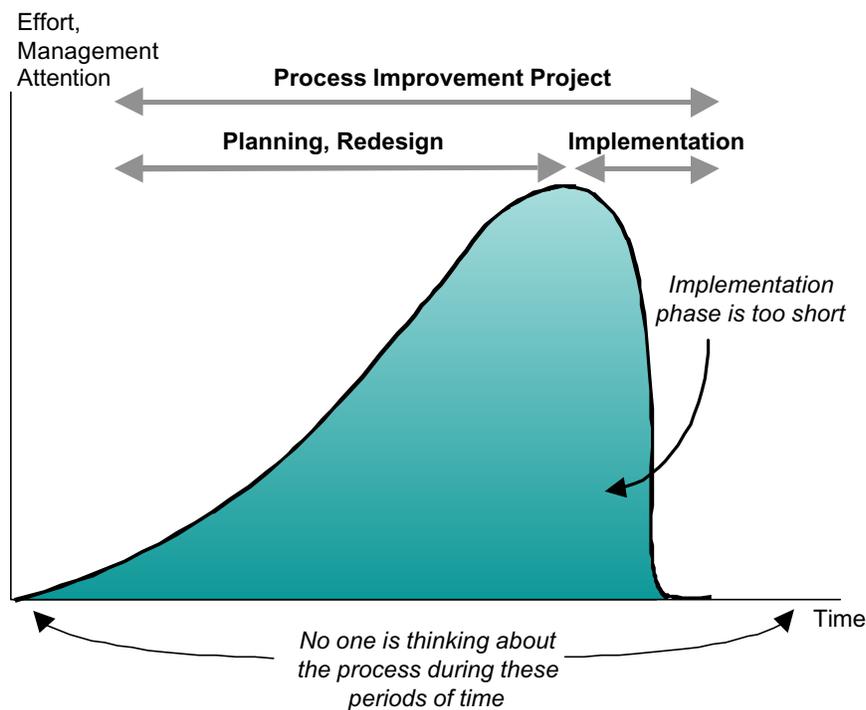
- Gauge how the process is accomplished currently
- Understand how others do it (both within and outside the industry)
- Evaluate opportunities for change, including more effective use of information technology

Over the last decade, reengineering efforts have enabled many organizations to eliminate non-value-added work, to speed up processes, and to reduce the labor content needed to carry out processes. The results are reflected in unprecedented productivity gains for the economy as a whole.

However, process improvement efforts within a corporation are typically episodic in nature. To be effective, reengineering projects must involve personnel who represent the various functions that the process crosses, and perhaps representatives from various business units, geographic regions, and plants where the process is executed. Cross-functional and representative teams are formed, along with management steering committees, to carry out the redesign of the process. Our research shows that such reengineering efforts have the following attributes (illustrated in Figure 3):

- They are episodic over long periods of time—e.g., for a given process, there may be a major reengineering or systems project every five to seven years.
- No one pays attention to the process during the time that no reengineering or systems efforts are under way.
- The portion of the reengineering project devoted to process redesign is longer and receives more management attention than the implementation phase when resources are frequently inadequate.

Figure 3: Typical Process Improvement Project Profile



Two significant problems result:

- Benefits from process improvements degenerate over time because of a number of factors: changes in the business environment, competitors improving their own processes, inability to capitalize on technology advancements, people changing part of the process without regard to the impact elsewhere, and so on.
- Processes that were made common across the company diverge over time for a range of reasons: local business units decide to go their own way, technology is adopted by one unit and not the others, and new improvements are introduced in one unit but not the others, and so on.

Process Management Fundamentals

Effective process management helps a company counteract these problems by putting in place *ongoing* organizational mechanisms to oversee processes end-to-end, companywide. Typical objectives for a process management program are listed in Figure 4.

Figure 4: Process Management Objectives

Key Process Management Goals
<ul style="list-style-type: none">• Balance the complex trade-offs between the need for corporate-wide efficiency through commonality and business unit/plant/geographic unique requirements• Measure and monitor process performance on an ongoing basis; conduct benchmarks, set targets• Align processes and process-related investments with the company's strategic direction• Coordinate process-enabling systems (e.g., SAP)• Coordinate continuous process improvement (including sharing of best practices)• Communicate process strategy, operation, and details to stakeholders• Train stakeholders in effective process execution• Define clear roles, responsibilities, and accountabilities for process management

While the specifics of how process management works at each company are different, the basic notion is to assign ongoing roles and responsibilities for managing processes across the enterprise. The new roles and responsibilities involved are summarized in Figure 5. Note that most of these roles are assigned to existing people in the organization and frequently no new staff is required, other than perhaps the support group.

The process management structure is overlaid on the existing line-management organization.

How do these roles operate in practice? The relationships among the roles are “dotted line,” as shown in Figure 6. Thus, the process management structure is overlaid on the existing line-management organizational configuration. This is an important point. The underlying

organizational structure can (and will) change. However, as long as the company remains in the same basic business, it will need to carry out the same processes and keep the process management structure intact.

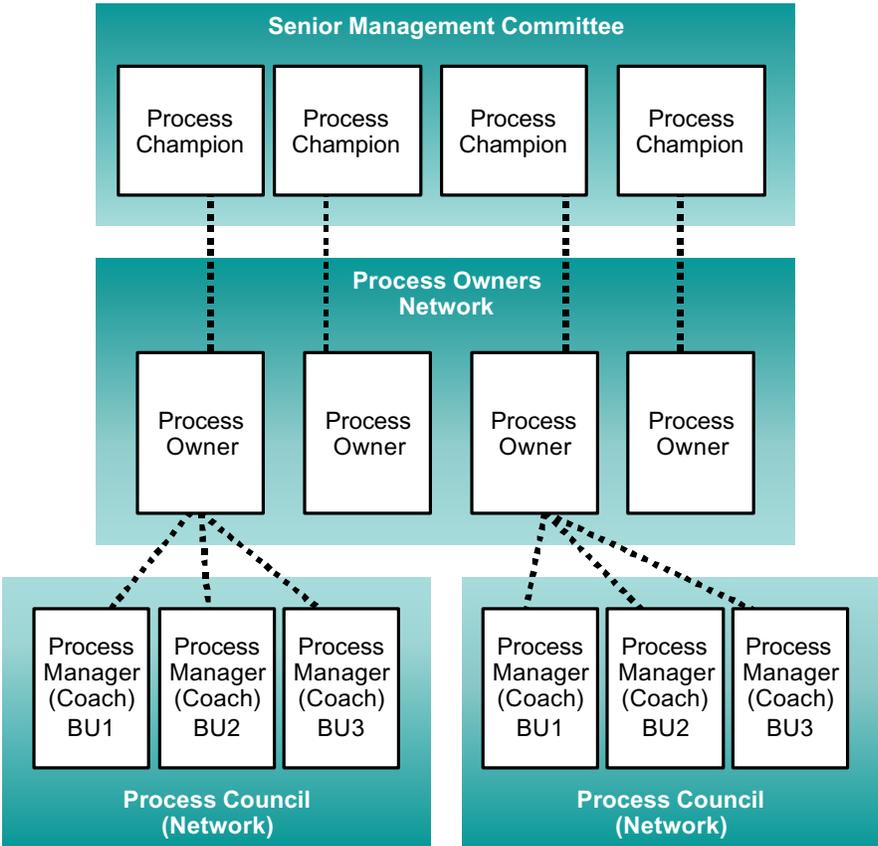
Figure 5: New Roles for Process Management

New Role	Description
Process Champion/Sponsors	<ul style="list-style-type: none"> • Senior executive to provide oversight and organizational clout for one or more major processes • Champions major process improvements, approves major decisions and investments, and arbitrates disputes
Process Owners Network	<ul style="list-style-type: none"> • Group of process owners acting in concert • Set policies and guidelines for process management including common methods and tools • Owns the top-level process model and defines process boundaries
Process Owners	<ul style="list-style-type: none"> • End-to-end process design accountability for one major process • Orchestrates process improvements working with the Process Council • Recommends technology investments (owns the budget) • Monitors process performance; Benchmarks against best-in-class • Presents “state of the process” reports including compliance with levels of commonality
Process Council (Network)	<ul style="list-style-type: none"> • Includes representatives from functional areas and business units that carry out the process • Sets direction for the process • Recommends levels of commonality • Participates in improvement efforts; shares best practices • Defines system requirements to support the process across business units
Process Support Group	<ul style="list-style-type: none"> • Small unit of process improvement professionals that service all process owners • Defines common improvement and measurement methodologies • Helps with process redesign and implementation
Process Managers (Coach)	<ul style="list-style-type: none"> • Line manager or supervisor to whom people executing the process report, or who takes on responsibility for local compliance/improvement of the process in cross-functional teams

The process owner¹ has the pivotal role of maintaining oversight of a major process across the enterprise. Typically, not all the people carrying out the process will report directly to the process owner, although some might. (For example, the plant manager for one plant might be designated as the process owner of the *Produce Product* process across the entire company.)

¹See monograph, "Institutionalizing Process Improvement: The Role of the Process Owner," by Robert M. Curtice, Arthur D. Little.

Figure 6: Relationships Among Process Management Roles



The process owner makes change happen through process councils, which are networks of process managers (shown in Figure 6) who represent that process in different business units, plants, or geographies. These process managers in various business units manage personnel who are carrying out some or all of the process. The managers' process management responsibilities are in addition to their day-to-day line-management duties. Thus, process councils consist of people who actually carry out the process and, therefore, know what improvements are needed and what solutions are practical. This scheme has been shown to be preferable to a separate process management structure consisting of staff personnel.

Depending on the size and complexity of the enterprise, several layers of sub-councils may exist. For instance, a process manager in the *Produce Product* council might be the head of a sub-process council, whose scope might be *Maintain Equipment*, *Schedule Production*, or *Ship Product*. The idea is that every process council must consist of personnel from across the business.

Process councils or sub-councils might meet once or twice a year or more frequently if in the midst of a major re-engineering or systems implementation effort. Otherwise they communicate by e-mail, videoconference, or one of the new Web-based collaboration tools. In summary, process councils, under the leadership of the process owner, are responsible to:

Process councils know what solutions are practical.

- Define the process (or sub-process) and understand how it operates today, across the enterprise
- Set up uniform metrics to monitor efficiency and effectiveness of the process
- Benchmark the performance of the process against competitors and best-in-class companies
- Determine the right level of process commonality across the business units, plants, or geographies
- Define the standards for carrying out the process
- Participate in major reengineering efforts to upgrade and improve the process
- Specify the information technology required to support the process in line with the desired levels of commonality
- Participate in systems projects to implement new or enhanced technology
- Develop uniform training programs for the process

Process Management Guidelines and Techniques

Before process owners can be assigned, the processes themselves must be identified and defined. This is not as easy as it sounds. Processes should be defined in a top-down fashion, starting with the top-most 6 to 12 processes and then breaking down each of these into a set of sub-processes, and so on. Definitions of each process should be prepared to clarify the boundaries and main outputs.

Identifying and defining process is not as easy as it sounds.

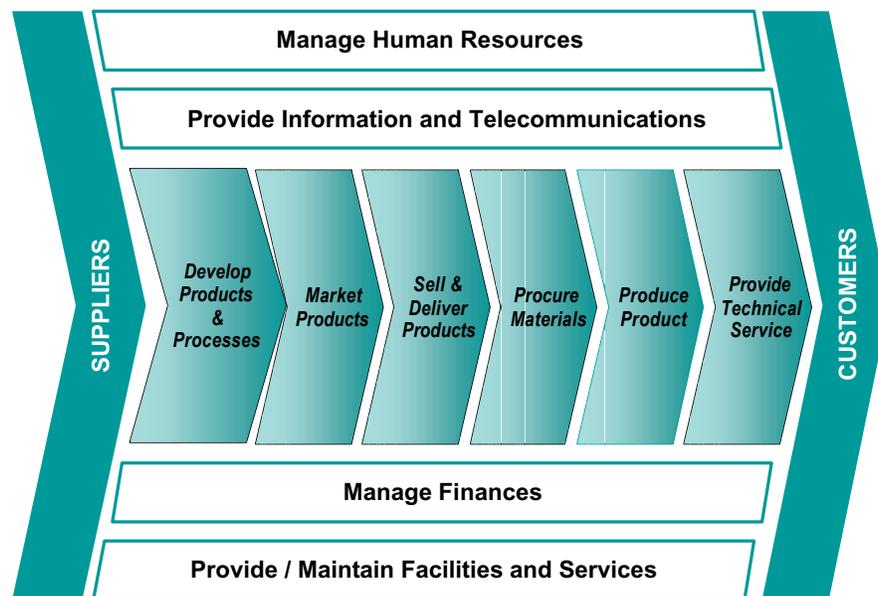
Note that this “top-down” approach is preferable to starting in the middle, which unfortunately some companies do. That is, some companies identify a critical process and assign an owner without regard to other processes. The problem with this approach is that

the scope and boundaries of the process are very difficult to define absent consideration of the other processes, For example, is *Pay Invoice* part of *Procure Material* or part of *Manage Financial Resources*? As another guideline, the processes at any level should be exhaustive and mutually exclusive. In other words, the set of processes must cover everything in the company, and any particular sub-process or activity should be wholly contained within one higher-level process.

Capture the top-most processes in a “process model.”

Frequently, it is useful to capture the top-most set of processes into a graphical “process model” that people can relate to. A typical top-level process model for a manufacturing company is shown in Figure 7.

Figure 7: Typical Top-Level Process Model



Another helpful guideline is to insist that the name of each process begins with a verb, as do the processes shown in Figure 7. This helps ensure that the processes represent actions (what is done) and not department names (who does it). Confusing processes with functions or departments is a major pitfall that requires a mental-model shift to overcome it.

Process portfolio management is a technique for:

- Reviewing processes at a corporate level and making decisions relative to resource allocation (e.g., investment in information technology)
- Setting priorities for process improvement efforts

A matrix is developed with the processes as columns and the strategic business objectives as rows. The relative importance of each process in achieving the business objective is indicated by different-size circles in each cell. An additional row can be used to record an assessment of the competitive position of each process, e.g., from a benchmark study. The resulting matrix (see Figure 8) gives an informative picture of where critical improvements are needed.

Figure 8: Process Portfolio Analysis

STRATEGIC OBJECTIVES		PROCESSES						
		Develop Products and Processes	Market Products	Sell and Deliver Products	Procure Materials	Produce Product	Provide Technical Service	
Benchmark Position		–	+	=	–	=	+	
Corporate	Reduce Costs							
	Improve Brand Image							
	Capitalize on Intellectual Property							
BU #1	Expand Markets							
	Improve Quality							
	Cross-License Products							
BU #2	Improve Customer Service							
	Reduce Costs of Warranty							

Major Impact

Moderate Impact

Process Rationalization

In any enterprise in which the same process is carried out in multiple business units, geographical regions, or plants, there will be an issue around rationalizing processes and determining the proper level of process commonality.

There are many benefits that stem from common processes, i.e., processes that are carried out in a standardized manner wherever in the enterprise they occur. Some of these benefits are captured in Figure 9.

Figure 9: Benefits of Common Processes

Common Processes
<ul style="list-style-type: none">• Facilitate shared service operations• Permit common training programs• Ease the transfer of personnel• Encourage and enable sharing of information systems• Provide for a uniform customer interface and sharing of customers• Facilitate adoption of best practices across units• Promote comparable performance measurement

There is a frequent misconception that all processes must be standardized.

There is a frequent misconception that process management means that all processes must be standardized. Not so. Process management suggests that decisions about process commonality only be made after careful analysis. Not only are there legitimate reasons for processes to be different in different business units or geographies, there may be little or no payoff to standardizing some processes. It may not be worth the effort. And experience demonstrates that considerable effort is certainly needed to achieve greater uniformity of processes, from both practical and political perspective.

Without active management, processes in different business units, geographies, or plants and offices will tend to be carried out in a different fashion. This may stem from acquisitions of businesses that had different ways of doing business or from natural entropy (i.e., processes that were once common will naturally tend to diverge over time). Take a simple example: A large chemical company initiates a companywide project to unify all customer service processes and install a single version of SAP for all business units. Not long after the project is completed (revisit Figure 3), one business

unit decides to implement a new version of SAP with added features. The other business units do not want to pay for the upgrade and opt to stay with the old version.

A useful aid in determining whether processes should be common or not is the Process Commonality Map depicted in Figure 10. In this map, the sub processes form the columns of a matrix and the activities comprising each sub-process are organized within the columns into four rows, showing whether the activity is:

The Process Commonality Map is a useful aid.

- **Strategic**—done infrequently, but having a long-range impact on the company, e.g., deciding on a channel strategy
- **Planning**—done periodically of an analytic or planning nature, e.g. budgeting
- **Control**—regular or exception reporting; monitoring of actual versus planned results, e.g., budget-variance reporting
- **Operational**—high-volume routine transactional activities, e.g., order processing

This basic framework can be used for many types of analysis. In the Process Commonality Map, each activity is color coded to signify the level of commonality. In Figure 10 we show three levels:

- **Locally unique**—activity is carried out at a local (business unit or geographic) level in a unique fashion
- **Locally or regionally common**—activity is carried out locally or at a regional level, but according to a common process
- **Global**—activity is carried out one place for the entire enterprise

Recall that the responsibility for defining levels of commonality lies with each major process owner in conjunction with the process councils. Step one is to assess the current situation and create the “as-is” Process Commonality Map. Once the process owner and council create the basic map framework (in Figure 10 using the *Market and Sell Product* top-level process), council members from each unit or geography determine the current level of commonality and assign the appropriate color.

Figure 10: Process Commonality Map

	1 Manage Product	2 Market Product	3 Sell Product	4 Process Order & Service Customer	5 Fulfill Order	6 Invoice & Collect
S Strategic	Determine Product Mix & Market	Set Pricing and Channel Strategy	Target Customers	Set Customer Service Levels and Strategy	Establish Transportation and Distribution Strategy	Determine Collection Strategy
		Define Offer & Service Level	Develop Contract Guidelines & Policies			
		Determine Mkt/ Customer Segments & Strategies	Develop Contract Strategy			
		Determine Advertising/ Promotion Strategy				
P Planning & Analysis	Forecast Demand	Conduct Market Research	Establish Sales Territories, Assignments		Contract Carriers & Negotiate Rates	
	Optimize Short-Term Product Mix Offered	Plan Marketing & Budgets	Develop Sales Plan, Budget and Account Plan			
	Manage Demand	Analyze Markets & Competitors	Forecast Sales			
			Segment Customers			
C Controlling & Monitoring	Monitor Forecast v. Actual Demand	Report Product/ Market Profitability	Report Contract Effectiveness	Monitor Order Processing Performance	Track Shipment	Monitor Account Status
	Report Product Profitability	Report Customer Profitability	Report Sales	Monitor Customer Service	Monitor Carrier Performance	Age Receivables
		Monitor Advert/ Promo Effectiveness	Report Sales Efficiency & Effectiveness			
		Report Channel Effectiveness	Report Segmentation Effectiveness			
O Operational	Develop & Maintain MSDS	Create Marketing Communications	Maintain Customer Data	Process Inquiries and Quotes	Select Carrier & Build Shipments	Prepare and Present Invoices
	Distribute MSDS	Maintain Market Information	Manage Customer Relationship (CRM)	Capture Order	Create Ship Documents	Obtain Payment, Apply Cash
	Control Products	Manage Distribution Channels	Prospecting	Check Credit	Process Freight Payments	Process Collections
	Provide Product Assistance	Set Individual Product Prices	Establish Customer Contracts	Price Order	Load, Pack, Fill Order	
	Maintain Product Management Data		Send Samples & Literature	Process Returns	Consolidate Orders	
			Manage Price Exceptions	Compute Tax	Ship Product	
		Sell	Compute Freight	Process Return Shipments		
		Provide Technical Service	Service Customer	Manage & Maintain Fleet		
			Confirm Order & Delivery			

Locally Unique
 Locally or Regionally Common
 Global

Creating the “to-be” or desired state of process commonality is a joint effort of the council. A useful guideline is to first create a list of criteria by which one can determine the proper level of commonality for an activity, i.e., what factors would influence whether an activity should be unique or common. What guidelines should apply to the decision? The idea is to base the decision on a set of principles or guidelines, rather than on a “gut feel.”

Once the “to-be” map is created, it can be used along with the “as-is” map to indicate how much change is required and where the most change is needed. Evolving to the “to-be” vision may well take several years and require considerable investment in common systems, training, and change management.

Application of Process Management Concepts

Process management concepts are not new, but neither are they easy to implement. Entrenched hierarchical power structures in many corporations frequently prevent any meaningful cross-functional or cross-business-unit decision-making. Other companies continue to embrace process management. Most of them start with pilot programs in critical areas. Then they extend the scope incrementally while learning what works and tailoring it to fit the management style and needs.

Some companies start with pilot programs in critical areas—then extend the scope incrementally.

There are lessons to be learned from the process management activities at leading organizations, such as Amoco (now BP), Dow, Corning, DuPont, Johnson & Johnson, Lucent, Shell Chemicals, and 3M¹. Also of particular note are companies’ initiatives around cross-organizational networks (akin to process councils described above) at companies that include DuPont, Amoco, ARCO (now BP), and Mobil (now Exxon-Mobil)². In addition, Steven Stanton discusses the process management programs under way within IBM, Texas Instruments, Owens Corning, and Duke Power in his article in *Harvard Business Review*³.

¹ *From Process Improvement to Process Management—Shared Learnings From Industry Leaders*, Arthur D. Little, Inc.

² *Cross-Organizational Networks—Making Them Work*, Arthur D. Little, Inc., 1998.

³ Stanton, Steven, “How Process Enterprises Really Work,” *Harvard Business Review*, November/December 1999.

About the Author

Robert M. Curtice is a Vice President of Performance Improvement Associates, LLC, with more than 30 years of experience in assisting organizations as they manage strategic, technical, and organizational aspects of business improvement. He helps organizations improve decision making, redesign business processes, capture cost reductions, streamline operations, better serve customers, and capitalize on information technology. In addition, Mr. Curtice helps clients define and pursue business-to-business electronic commerce opportunities.

Contact Mr. Curtice at:

Mobile: (1) 781.608.0063

Email: bobcurtice@pfima.com